GOVERNMENT OF KERALA

Report on
Cost of Cultivation of Important Crops in Kerala - 1999-2000

DEPARTMENT OF ECONOMICS & STATISTICS
THIRUVANANTHAPURAM
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PREFACE

In Kerala, Department of Economics and Statistics is conducting a Study on Cost of Cultivation of Important Crops in Kerala every year since 1980 considering the importance of the subject Government had accorded sanction for the survey as per G.O. (Rt) No. 466/Plg. Dated: 27.10.1979. This is the 20th edition in the series and prepared on the basis of survey on Cost of Cultivation of Important Crops conducted during the year July 1999 to June 2000. The crops covered for the study during this year are Paddy (3 Seasons) Autumn, Winter & Summer as Seasonal Crops, Coconut, Pepper as Perennial and Banana and Tapioca as annual crops.

The fieldwork was carried out by the trained field staff of this department and the tabulation and consolidation of data were done in the Cost of Cultivation Division of this Directorate.

Suggestions for improvement are solicited.

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Thiruvananthapuram,
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REPORT ON COST OF CULTIVATION OF IMPORTANT CROPS IN KERALA 1999-2000

CHAPTER – I

GENERAL

I. Introduction

Changes in cropping pattern are a widely noted phenomenon in the State. These changes occur due to advantageous relative prices, cost of cultivation and such specifically economic factors. In order to chalk out various projects in agricultural sector and for the fixing the floor and support prices proper assessment of the cost of cultivation and value of product is necessary. With this objectives in view, Government of Kerala vide G.O (Rt) 466/79/plg dated 27/10/1979 accorded sanction for a scheme viz. Survey on Cost of Cultivation of Important Crops in Kerala. The present report relates to the survey conducted during 1999-2000.

The crops covered during the period under study is given below:-

I	Paddy (3 seasons)
II	Coconut
III	Tapioca
IV	Banana
V	Pepper

I.2 Objectives

This survey is mainly intended for estimating the cost of cultivation per hectare of important crops and for comparing the costs under different concepts, over a period.

I.3 Period of the Survey

The period of the survey was from 01/07/1999 to 30/06/2000

I.4 Design of the survey:-

The survey covered all the districts of Kerala by selecting 38 Taluks which are important growing centres of the different selected crops. From each selected taluk two investigator zones were selected using simple random sampling method.

Selection of cultivators

In each selected Investigator zone a list of cultivators growing paddy in the previous autumn season will be prepared from the last years Form I Diary of the EARAS. From this list of paddy growing cultivators last Autumn seasons five cultivators will be selected at random for the current years cost of cultivation study on autumn paddy. Similar procedure is adopted for the selection of cultivators for winter and summer paddy respectively by preparing a list of paddy growing plots in winter and summer of the previous EARAS round in the zone.

In case the cultivators selected for cost of cultivation study on Autumn paddy possess suitable number of plots with other specified crops in stipulated areas they may be selected for the cost of cultivation study on other crops like coconut, Tapioca, Banana, etc

If sufficient number of suitable plots are not available with the cultivators selected for autumn paddy the required number of plots for crops other than paddy will be selected from the list of wet and dry land plots of the same Investigator zone in last year. If the selected investigator zone in a taluk does not provide the required number of plots for these crops another Investigator zone in the taluk will be selected at random for selection of the remaining required number of plots/cultivators for the study on other crops.

The number of holdings selected for each crops in a taluk was as follows:-

1	Paddy	Autumn	10	(5 holdings each from one Investigator zone)
		Winter	10	(5 holdings each from one Investigator zone)
		Summer	10	(5 holdings each from one Investigator zone)
2	Coconut		10	(5 holdings each from one Investigator zone)
3	Tapioca		5	(Minimum 2 holdings in one Investigator zone)
4	Banana		5	(Minimum 2 holdings in one Investigator zone)

A holding was considered for the study only if it contained at least 25 cents under the crop in the case of paddy and 10 cents in the case of tapioca, banana. In the case of perennial crops like coconut and pepper the holdings should have 25 trees/plants with at least 50% bearing.

The holding size group of a crop was determined on the basis of the area under the crop under study in the holding as shown below:

Size	Group	Holding size	
		Paddy	Other crops
1	Small	< 0.40 hectare	< 0.2 hectare
2	Medium	0.40 to < 2 hectare	0.20 to < 0.80 hectare
3	Large	≥ - hectare	≥ -0.80 hectare

Note:- < - Less than ≥ - Greater than or equal to

I.5 Schedules

Three schedules were designed for the survey

Schedule I — This schedule is used for listing the plots for selection of holdings and recording the details of the selected holdings

Schedule II — This schedule is used for recording details of the cultivator's households, area of holdings, inventory of agricultural implements, livestock etc.

Schedule III — In this schedule the cultivation expenses incurred for a crop in each fortnight is reported.

I.6 Field work :-

Field work was done by 38 investigators in 38 selected taluks, one investigator in each taluk. The investigators visited the selected holdings every fortnight and recorded fortnightly operations in Schedule III. The field work was supervised by Taluk Statistical Officer at the taluk level and Deputy Director / District Officer at the District level.

I.7 Processing and Analysis of Data:-

The compilation and tabulation were done at the district level by the investigators posted for the survey. The state level consolidation of the data is done at the Directorate and the report writing and analysis are done at the Directorate.

I.8 Method of estimation of cost

(a) Concept of cost

Different cost concepts, cost 'A' cost 'B1' and cost 'B' and cost 'C' have been followed in the analysis as shown below:-

Cost 'A'

Cost 'A' consists of cash and kind expenses (paid out costs) actually incurred by the cultivators. This includes -

i. Hired human labour
ii. Animal labour
iii. Machine labour
iv. Seed (seed lings)
v. Farm yard manure
vi. Chemical fertilizers
vii. Plant protection
viii. Land tax
ix. Irrigation cess
x. Repair and maintenance charges of implements, machinery and buildings
xi. Interest on working capital
xii. Other expenses

Cost 'B1' : Cost 'A' + Interest on fixed assets (excluding land)

Cost 'B' : Cost'B1' + interest on land value

Cost 'C' : Cost 'B' + Imputed value of family labour

(b) Procedure for imputation of values of owned inputs.

In the production process certain inputs from home stock are used in the production process. In order to estimate the cost of cultivation it is necessary to impute the value of these inputs. The procedure used for the imputation of values of such home stock inputs is indicated below:-

i	Family labour	Imputed on the basis of average wage rate per work hour of hired labour.
ii	Owned and exchange human labour	The rate of wages per hour for hired human labour is taken for imputing the value of own stock and exchange human labour
iii	Owned and exchange animal labour	The charges paid per hour,for hired animal labour is taken for imputing the value of owned and exchange animal labour.
iv	Owned and exchange machine labour	The hire charges per hour for machine labour has been taken
v	Implements	Repair and maintenance charges of implements
vi	Owned seed	Farm produced (home grown) seed has been imputed at the prices prevalent in the investigator zone concerned at the time of sowing
vii	Farm produced manure	Imputed at the rate prevalent in the zone concerned.
viii	Interest on fixed capital	Interest on the present value of fixed assets such as land, farm, building, implements, machinery, irrigation, structure, equipments and livestock (only draught animals) at the rate of 10 % per annum has been calculated.

ix	Interest on working capital	Interest has been charged at the rate of 10% per annum on the working capital, cash and kind expenses excluding items in respect of which payments are generally made after harvest (ie. rent, land tax , etc) incurred during the period of cultivation
x	Payments of kind	The payments in kind have been evaluated at the market prices prevalent in the locality at the time of payment. Perquisites have been included in the payments in kind calculated at the market prices.

(C) Allocation of joint costs to different crops

Some of the inputs used for the cultivation of one crop are common for many other crops also. For the purpose of imputing the cost share of individual crops, the cost of such inputs is apportioned in the following manner.

I	Repair and maintenance charges of implements	In proportion to the area under the crop
Ii	Interest on own fixed capital (excluding land)	In proportion to the area under the crop
Iii	Interest on land value	Interest on the value of land under the crop

(D) Procedure for valuation of farm assets

i	Own farm buildings (cattle sheds, storage shed etc)	Valuated at prices prevailing in the locality
ii	Implements and other machinery	Valuated at prevalent market prices
iii	Livestock (only draught animals)	Valuated at prevalent market prices

Chapter – 2

RESULTS OF THE SURVEY

Paddy is cultivated in the state in three seasons viz. Autumn (Virippu), Winter (Mundakan) and Summer (Punja).

The following table gives the total cropped area and the are under the paddy crops for the three seasons during 1999-2000

Table 1 - Area under paddy during 1999-2000

Total cropped area (in lakh ha)	Are under paddy (in lakh ha)			
	Autumn	Winter	Summer	Total
30.01	1.21	1.70	0.58	3.49
	(4.03)	(5.66)	(1.93)	(11.62)

Source:- Agricultural statistics of Kerala 1999-2000 (Figures in brackets give the percentage of paddy in each season to the total cropped area)

Out of the three seaons of paddy, Autumn (virippu) and Winter (Mundakan) are the most important seasons where paddy produce fields maximum.

The following table shows the percentage distribution of area under paddy crop in each season to the total gross area under paddy.

Table 2 - Percentage of area under paddy in each season to the gross area under paddy during 1999- 2000

Percentage of area under paddy			
Autumn	Winter	Summer	Total
34.67	48.71	16.62	100

From the above table it is seen that about 84% of the paddy area is in autumn and winter seasons

The rice production of the state during the year under study stood at 7.70 lakh tonnes and its productivity for three seasons are given below:

Table 3 - Production of Rice during 1999- 2000 (in lakh tonnes)

Season	Production of rice (lakh tonnes)	percentage
Autumn	2.53	32.86
Winter	3.73	48.44
Summer	1.44	18.70
Total	7.70	100.00

Table 4 - Average productivity of paddy during 1999-2000

Season	Average productivity (Kg/ hectare)
Autumn	2081
Winter	2193
Summer	2491

The productivity of summer paddy is higher than that of other seasons.

Out of the total gross irrigated cropped area 44% constitutes under paddy which is shown below.

Table 5 - Percentage of area irrigated under paddy (area in hectare)

Area irrigated	Total cropped area irrigated	Percentage
208790	470698	44.35

1. Autumn paddy

The total number of holdings selected for the cost study of Autumn paddy cultivation were 357. They were scattered in all the 38 selected taluks of the state. The number of holdings selected and the area under the crop in each holding size class viz small, medium and large are given below:

Table 6 - Area under Autumn paddy during 1999-2000

Holding size class	No of selected holdings	Area under the crop in the sample (ha)	Percentage	Average holding (ha)
Small	210	48.19	24.06	0.22
Medium	125	91.25	45.55	0.73
Large	22	60.87	30.39	2.77
Total	357	200.31	100.00	0.56

The holdings under report had a total operational area of 200.31 hectare and the average size of holding was 0.56 hectare

A. Cost of cultivation

The estimated per hectare cost of autumn paddy cultivation is furnished below:

Table 7 - Cost of cultivation per hectare of paddy (autumn) during 1999-2000

Sl No	Component of different cost concept	Cost per hectare (in Rs)	% Distribution of cost
1	Hired human labour	9874	60.88
2	Animal labour	502	3.10
3	Machine labour	1142	7.04
4	Seed / seedlings	972	5.99
5	Farmyard manure and chemical fertilizers	2336	14.41
6	Plant protection	183	1.13
7	Land tax and irrigation cess	31	0.19
8	Repair and maintenance charges of implements, machinery and building	185	1.14
9	Interest on working capital	761	4.69
10	Other expenses	232	1.43
11	Total cost 'A' (1-10)	16218	100.00
12	Interest on fixed capital	1047	
13	Cost'B1' (11+12)	17265	
14	Interest on land value	17847	
15	Cost 'B' (13+14)	35112	
16	Imputed value of household labour	996	
17	Cost 'C' (15+16)	36108	

The share of hired human labour during 1999-2000 to the total cost'A' in Autumn paddy cultivation was 60.88%. Animal labour and machine labour constituted 3% and 7% respectively. Human labour cost which is the major component of the paddy cultivation consists of hired labour, exchange labour and family labour. Among these irrespective of the size group of holdings hired human labour formed the major portion.

The following table illustrates the percentage of hired labour hours engaged in autumn paddy cutivation to the total labour hours.

Table 8 Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All size
Male	21.99	17.61	19.28	19.20
Female	63.43	69.08	77.47	70.12
Total	85.42	86.69	96.75	89.32

As usual the proportion of hired labour to total human labour input steadily increases with the increase in the size of holdings. It is seen that cultivators belonging to large class are seen to depend for 96.75% of their requirements on hired labour. The cost of hired human labour per hectare works out to Rs.9874.

Seed/seedlings are important input of paddy cultivation per hectare as estimated from the survey is 6% of the total cost 'A'. For paddy cultivation home produced manure, chemical fertilizers etc are used, the cost of which was Rs.2336 per hectare during this round. When compared to the previous year the combined cost of organic manure and chemical fertilizers per hectare is seen decreased in medium and large size of holdings. This may be due to the hike in the cost and the decrease in the application of these fertilizers.

It is noted that the per hectare cost towards plant protection measures is on decreasing trend. While the cost per hectare in 1998-99 was Rs 265 and it is Rs 183 in 1999-2000. The percentage share of land tax and irrigation cess is nominal ie below 1%. Expenditure on repair and maintenance of implements and machinery varies from year to year and from size class to size class. It is worked out to

be Rs 185 during 1999-2000. It seems to be increasing as size class increasing. Interest on working capital was Rs 761 per hectare and other expenses was Rs 232 during 1999-2000.

Cost 'B1'

Cost 'B1' is estimated by adding the interest on fixed capital (excluding land) to Cost 'A'. The estimated interest on fixed capital for 1999-2000 and Cost 'B1' is Rs 17265.

When compared to the previous year interest on land value increased from Rs 16807 to Rs 17847 during this year. The size class variation is seen minimum in large size class and maximum in small size class.

Cost 'B' and Cost 'C'

Cost 'B' is estimated by adding the interest on land value to Cost 'B1' and Cost 'C' is estimated by adding the inputed value of household human labour to Cost 'B'. The estimated Cost 'B' was 35112 and the imputed value of household labour was Rs 996 per hectare. The following table illustrates a comparison with the previous years costs and the year under study.

Table 9 - Cost of cultivation of (Autumn) paddy in Rs/ for 1999-2000

Concept of cost	Year	Holding size class			
		Small	Medium	Large	All Sizes
Cost 'A'	1998-99	18859	18125	15785	17313
	1999-2000	19079	16316	14898	16218
Cost 'B'	1998-99	47762	35657	27857	33186
	1999-2000	41041	35816	30301	35112
Cost 'C'	1998-99	49656	36804	28447	36273
	1999-2000	42983	36816	30638	36108

Compared to the previous year the Cost 'A' has decreased by 6% during 1999-2000. The percentage increase of Cost 'B' comes to 6% and Cost 'C' showed a nominal decrease of below 1%.

B. Output

The value of the product and by-product of Autumn Paddy Cultivation for the year 1999-2000 is given in the following table

Table 10 - Value of product and by product per hectare (in Rs) during 1999-2000

Product/By-product	Holding size class			
	Small	Medium	Large	All Sizes
Paddy	18361	16625	18479	17331
Straw	3595	2945	1991	2757
Total	21956	19570	20470	20088

During the year 1999-2000 the per hectare value of output is estimated at Rs 20088 which is more than the value of output for 1998-99.

C. Cost of Production of Paddy per quintal

Cost of production of paddy per quintal is estimated by dividing the cost of cultivation per hectare (after deducting the value of by-product per hectare from the cost of cultivation per hectare) by the quantity of paddy produced per hectare.

Table 11 - Cost of production of paddy per quintal during Autumn season 1999-2000

Concept of Cost	Hoding size class			
	Small	Medium	Large	All Sizes
Cost 'A'	645	592	461	561
Cost 'B'	1560	1456	1011	1348
Cost 'C'	1641	1500	1023	1390

When Cost'A' is considered the cost of production of paddy per quintal was Rs.561 during the period under report. The following table illustrates the comparission of cost of production of autumn paddy with the previous year.

Table 12 - Cost of production per quintal of Autumn paddy during 1998-99 and 1999-2000

Concept of cost	1998-99	1999-2000	% increase/decrease
Cost 'A'	572	561	-2
Cost'B'	1260	1348	+7
Cost 'C'	1302	1390	+7

(ii) Winter Paddy

The study on cost of cultivation of Winter Paddy was conducted in 380 holdings. The sample area under Winter Paddy in small, medium and large size classes of holdings are given below.

Table 13 – Area under Winter Paddy during 1999-2000

Holding size class	No: of selected holdings	Area under the crop in the sample (ha)	Percentage	Area per holding (ha)
Small	205	52.55	20.72	0.26
Medium	146	114.02	44.97	0.78
Large	29	86.99	34.31	0.39
Total	380	253.56	100.00	0.67

The total operated area of the selected holdings is 253.56 hectares. The average size of a sample holding is 0.67 hectare.

A.Cost of cultivation

The cost of different items per hectare of Winter Paddy is given below and details are given in Appendix.

Table 14 – Cost of cultivation per hectare of paddy (Winter) during the year 1999-2000

Sl. no	Component of different cost concept	Cost per hectare (in Rs)	Percentage distribution of Cost 'A'
1.	Hired human labour	10018	55.92
2.	Animal labour	629	3.51
3.	Machine labour	1610	8.99
4.	Seed/Seedlings	1011	5.64
5.	Farmyard manure and Chemical fertilizers	2457	13.71
6.	Plant Protection	214	1.19
7.	Land tax and Irrigation cess	42	0.23
8.	Repair and maintenance charges of implements, machinery and buildings	512	2.86
9.	Interest on working capital	827	4.62
10	Other expenses	596	3.33
11	Total Cost A (1-10)	17916	100.00
12	Interest on fixed capital	814	
13	Cost 'B1' (11+12)	18730	
14	Interest on land value	15450	
15	Cost 'B' (13+14)	34180	
16	Imputed value of household labour	928	
17	Cost C (15+16)	35108	

The per hectare cost towards hired human labour in winter paddy cultivation comes to Rs 10018 in 1999-2000. It accounts to 53% of the total Cost A.

The percentage of hired human labour hours to the total human labour hours is given below.

Table 15 – Percentage of hired human labour hours to total human labour hours

Sex	Holding size class			
	Small	Medium	Large	All Sizes
Male	25.75	22.65	15.01	20.70
Female	59.32	69.99	80.33	71.17
Total	85.07	92.64	95.34	91.87

Out of the total human labour hours employed in Winter Padddy cultivation 92% is accounted by hired labour. Female hired labour is more than that of the male labour hours. The ploughing and machine operated of the work are attended by women labourers and more over this will also reduce the cost by way of wages

The cost of animal labour is higher in the case of small cultivators whereas the machine labour cost is higher in the case of large cultivators. The cost of seed/seedligs is Rs 1011 per hectare which is 6% of the total cost 'A'. Farmyard manure and chemical fertilizers which is an important item of paddy cultivation accounts to 14% . The cost of pesticides and insecticides is estimated at Rs 214 per hectare. The percentage share towards land tax and irrigationcess is negligible. The expenditure on repair and maintenance of implements accounts for nearly 1%. Interest on working capital is computed at Rs 827.

Cost 'B1' and Cost B

Cost B1 is estimated by adding the interest on fixed capital (including land) to cost 'A'. It is found to be Rs 18,730/-.

Cost 'B' is estimated to be Rs 34,180 when compared to the previous round interest on land value has increased during this round.

Cost 'C'

Cost 'C' is estimated by adding the inputed value of household labour to Cost 'B'. It is seen as Rs 35,108.

The estimated cost for the winter paddy per hectare under three major concepts of cost are given below.

Table 16 – Cost of cultivation of Winter Paddy (Rs/ha)

Concept of cost	Holding size class			
	Small	Medium	Large	All Sizes
Cost 'A'	19626	17387	17569	17916
Cost 'B'	37676	33746	32507	34180
Cost 'C'	39558	34543	33031	35108

Cost of cultivation of Winter Paddy for 1998-99 and 1999-2000 are given below.

Table17 - Cost of cultivation of Winter Paddy (Rs/ha) for 1998-99 and 1999-2000

Concept of cost	Year	Holding Size Class			
		Small	Medium	Large	All Sizes
Cost 'A'	1998-99	19280	16539	15578	16545
	1999-00	19626	17387	17569	17916
Cost 'B'	1998-99	45017	38655	27820	35447
	1999-00	37676	33746	32507	34180
Cost 'C'	1998-99	46937	39703	28064	36350
	1999-00	39558	34543	33031	35108

B. Output

The estimates of value of paddy and straw obtained from winter paddy cultivation is given below. The unprevented flood situation in some district affected the crops which resulted in low production.

Table 18 - Value of output (Rs/hect)

Product & By product	Holding Size Class			
	Small	Medium	Large	All Sizes
Padddy	16993	16340	20652	17966
Straw	5313	4778	2393	4074
Total	22306	21118	23045	22040

C. Cost of production of Paddy Per Quintal

Cost of producing one quintal of paddy is worked out by dividing the cost of cultivation per hectare (after deducting the value of the product per hectare from the cost of cultivation per hectare) by the yield per hectare.

Table 19 – Cost of production of Winter Paddy (Rs/ha)

Concept of cost	Holding Size Class			
	Small	Medium	Large	All Sizes
Cost 'A'	573	521	492	519
Cost 'B'	1296	1197	976	1129
Cost 'C'	1371	1229	992	1164

The cost of production of Winter Paddy per quintal for 1998-99 and 1999-2000 are presented below for comparission.

Table 20 – Cost of production of Winter Paddy per quintal (in Rs.) for 1998-99 and 99-2000

Concept of cost	Year	Holding Size Class			
		Small	Medium	Large	All Sizes
Cost 'A'	1998-99	521	478	447	467
	1999-00	573	521	492	519
Cost 'B'	1998-99	1558	1376	886	1196
	1999-00	1296	1197	976	1129
Cost 'C'	1998-99	1636	1419	894	1231
	1999-00	1371	1229	992	1164

When compared to the cost of production of previous year Winter Paddy per quintal relating to Cost 'A' showed an increasing trend.

III Summer (Punja) Paddy

The number of holdings selected for the study on cost of cultivation of summer paddy was 322 during 1999-2000. The details of these holdings are given below.

Table 21 - Area under Summer Paddy during 1999-2000

Holding Size Class	No:of selected holdings	Area under the crop in the sample (ha)	Percentage	Area per holding (ha)
Small	195	42.81	22.55	0.22
Medium	100	70.94	37.37	0.71
Large	27	76.10	40.08	2.82
Total	322	189.85	100.00	0.59

The holdings selected during the periods under report have a total operational area of 189.85 hectares. The average size of holdings was 0.59 hectare.

A. Cost of cultivation

The cost of cultivation per hectare of summer paddy is given in the following table.

Table 22 - Cost of Cultivation per hectare of Summer Paddy for the year 1999-2000

Sl. no	Components of different Cost concept	Cost per ha (Rs)	% Distribution of Cost 'A'
1.	Hired human labour	9994	51.64
2.	Animal labour	549	2.84
3.	Machine labour	1760	9.09
4.	Seed/Seedlings	1128	5.83
5.	Farmyard manure & Chemical fertilizers	2874	14.85
6.	Plant protection	631	3.26
7.	Land tax and Irrigation cess	178	0.92
8.	Repair and maintenance charges	557	2.88
9.	Other expenses	796	4.11
10	Interest on working capital	887	4.58
11	Total Cost 'A' (1-10)	19354	100.00
12	Interest on fixed capital	843	
13	Cost 'B1' (11+12)	20197	
14	Interest on land value	10706	
15	Cost 'B'(13+14)	30903	
16	Imputed value of household labour	1225	
17	Cost 'C' (15+16)	32128	

From the above table it is seen that about 64% of the total cost 'A' constitutes to labour cost. When compared to the previous year hired human. The percentage of hired human labour hours engaged in the cultivation of summer paddy during 1999-2000 is given below.

Table 23 - Percentage of hired human labour hours engaged in Summer Paddy Cultivation

Holding Size Class	Male	Female	Total
Small	25.27	55.93	81.20
Medium	20.40	69.00	89.40
Large	18.60	77.66	96.26
All Size	21.11	68.40	89.51

During this round 90% of the total human labour hours is hired human labour. The cost of seed/seedlings per hectare is found to be Rs 1128 during the year. It is seen that 15% of the total cost 'A' accounts to farmyard manure and chemical fertilizers. The expenditure towards plant protection measures is estimated to 3% of the total cost 'A'. Only a small percentage is expended for land tax and irrigation cess. The estimated expenditure per hectare on repair and maintenance changes of implements and machinery is found to be Rs 557 during the period under report. About 5% of the Cost 'A' accounts for interest on working capital.

Cost 'B1' & Cost 'B'

Cost 'B1' is obtained by adding the interest on fixed capital (excluding land) to Cost 'A'. The interest as fixed capital is estimated to Rs 843 and Cost 'B1' is found to be Rs 20197.

Cost 'B' is estimated to be Rs 30903 when compared to the previous round interest on land value has decreased during this round.

Cost 'C'

Cost 'C' is estimated by adding the imputed value of household labour to Cost 'B'. It is seen as Rs 32128.

The estimated cost for the summer paddy per hectare under three major concepts of cost are given below.

Table 24 – Cost of cultivation of Summer Paddy(Rs/ha)

Concept of cost	Holding Size Class			
	Small	Medium	Large	All Sizes
Cost 'A'	19927	18534	19118	19354
Cost 'B'	36805	30499	27168	30903
Cost 'C'	39483	31795	27509	32128

Cost of cultivation of Winter Paddy for 1998-99 and 1999-2000 are given below.

Table 25 – Cost of cultivation of Summer Paddy (Rs/ha) for 1998-99 and 1999-2000

Concept Of Cost	Year	Holding Size Class			
		Small	Medium	Large	All Sizes
Cost 'A'	1998-1999	17769	19811	28721	20691
	1999-2000	19927	18534	19118	19354
Cost'B'	1998-1999	50345	43445	44921	43157
	1999-2000	36805	30499	27168	30903
Cost 'C'	1998-1999	53066	43841	45241	44122
	1999-2000	39483	31795	27509	32128

B. Output

The estimates of value of paddy and straw obtained from Summer Paddy Cultivation is given below:-

Table 26 – Value of Output (Rs/ha)

Product & By product	Holding Size Class			
	Small	Medium	Large	All Sizes
Paddy	19263	21886	25064	22568
Straw	5137	3087	2573	3343
Total	24400	24973	27637	25911

C. Cost of production of paddy per quintal

Cost of producing one quintal of paddy is got by dividing the cost of cultivation per hectare (after deducting the value of by product per hectare from the cost of cultivation per hectare) by the yield per hectare.

Table 27 - Cost of production of Summer paddy per quintal

Concept of cost	Holding size class			
	Small	Medium	Large	All size
Cost'A'	120	429	404	276
Cost'B'	257	761	600	475
Cost'C'	279	797	608	496

A comparison between the cost of production during 1998-1999 and 1999-2000 is given in the following table

Table 28 - Cost of production of paddy per quintal during 1998-1999 and 1999-2000

Concept of cost	1998-1999	1999-2000
Cost'A'	708	276
Cost'B'	1607	475
Cost'C'	1645	496

2.2 Coconut

During 1999-2000 coconut is cultivated in 9.25 lakh hectares. The total area under coconut and the average yield per hectare during the period under report is given below:

Table 29 - Area and average yield of coconut 1999-2000

Area under coconut (ha)	Percentage to total cropped area	Average yield per hectare (no. of nuts)
925035	30.82	5747

From the above table it is seen that the percentage of area under coconut cultivation to total cropped area is 31% and the average yield per hectare is 5747 numbers

For the survey on cost of cultivation 380 number of coconut holdings were selected for the year 1999-2000. The details of these holdings according to size class viz small, medium and large are given below:

Table 30 - Number of holdings and area under coconut

Holding size class	No. of holdings	Area under coconut in the sample (ha)	Percentage	Area per holding (ha)
Small	114	18.22	8.35	0.16
Medium	183	74.66	34.19	0.41
Large	83	125.45	57.46	1.51
All size	380	218.33	100.00	0.57

The selected holdings had a total 218.33-hectare of operational area during 1999-2000. The average size of holding was 0.57 hectare.

Number of bearing trees in the selected plots

Out of the total coconut trees in the selected plots 77% was found to be bearing and the remaining non-bearing trees. The number of bearing and non bearing per hectare for the year 1999-2000 is given below

Table 31 - Number of bearing and non-bearing trees per hectare

Type of trees	No. of trees per hectare	Percentage
Bearing	170	77.27
Non-bearing	50	22.73
Total	220	100.00

A. Cost of cultivation

The cost of cultivation of coconut is estimated under the four different concepts of cost (viz. Cost 'A', Cost 'B1', Cost 'B' and Cost 'C'.

Cost 'A' consists of cash and other kind expenses is worked out to rs17125/- per hectare during 1999-2000. The estimated cost under different items of expenditure per hectare and the percentage distribution of these items to total cost 'A' are given in the following table.

Table 32 - Cost of cultivation per hectare of coconut during the year 1999-2000

Sl. No	Components of different cost concepts	Cost per hectare (Rs)	% distribution of cost 'A'
1	Hired human labour	7923	46.27
2	Animal labour	50	0.29
3	Machine labour	325	1.90
4	Seed / seedlings	64	0.37
5	Farmyard manure and chemical fertilizers	4927	28.77
6	Plant protection	91	0.53
7	Land tax and irrigation cess	71	0.42
8	Repair and maintenance charges	620	3.62
9	Other expenses	1560	9.11
10	Interest on working capital	1494	8.72
11	Total cost 'A' (1-10)	17125	100.00
12	Interest on fixed capital	1847	
13	Cost'B1' (11+12)	18972	
14	Interest on land value	200071	
15	Cost 'B' (13+14)	219043	
16	Imputed value of household labour	1108	
17	Cost 'C' (15+16)	220151	

Labour cost is the major component of cost 'A' which includes hired human labour, animal labour and machine labour. It works out to Rs.8298/-. The percentage distribution of hired human labour participation in coconut cultivation to the total labour hours is given below for males and females separately.

Table 33 - Percentage Distribution of hired human labour hours to the total human hours.

Sex	Holding size class			
	Small	Medium	Large	All sizes
Male	58.09	71.17	68.94	68.49
Female	6.92	10.71	18.35	14.45
Total	65.01	81.88	87.29	82.94

When compared to the paddy cultivation female participation is lowest in coconut cultivation. About 83% of the total human labour hours has been shared by hired human labour for planting new seed / seedlings Rs.64 is spent. Application of farmyard manure and chemical fertilizers constitutes a major share is 29% of total cost 'A'. Cost towards plant protection, land tax and irrigation cess accounts only a nominal percentage. Repair and maintenance charges shares to nearly 4% of the total cost 'A' Per hectare, interest on working capital is estimated to Rs.1494/-

Cost 'B1' and Cost 'B'

Cost 'B1' is estimated by adding the interest on fixed capital (excluding land) to Cost 'A'. It is found to be Rs.18972/-

Interest on land value is estimated as Rs.200071 during this round.

Cost 'C'

Cost 'C' is estimated by adding the imputed value of household labour to Cost 'B'. It is estimated to be Rs.220151

Table 34 - Cost of cultivation of coconut per hectare during 1999-2000

Concept of cost	Cost per hectare (in Rs)		Percentage increase
	1998-1999	1999-2000	
Cost 'A'	15565	17125	10.02
Cost 'B'	168134	219043	30.27
Cost 'C'	169295	220151	30.03

B. Value of product

Value of output / Hectare is seen as Rs.35553 during 1999-2000

Table 35 - Value of output / Hectare

Output	Value (Rs)
Product	34066
By-product	1487
Total	35553

2.3 Tapioca

The total area under tapioca cultivation in the state during 1999-2000 was 111922 hectares. Details are given below

Table 36 - Area and average yield of Tapioca during 1999-2000

Total cropped area (ha)	Area under tapioca (ha)	Average yield per hectare (Kg.)	Percentage of area under tapioca to total cropped area
30001704	111922	23463	0.37

About one % of the total cropped area was under tapioca cultivation during 1999-2000. The yield per hectare of tapioca was 23463 Kg.

Selected holdings

During 1999-2000 for the estimation of the cost of cultivation of tapioca 180 holdings were selected. The details of these holdings in each size class is given in the following table.

Table 37 - Area and number of holdings selected

Size class	Area under the crop in the sample (ha)	Percentage to total area of selected holdings	No. of selected holdings	Area per holding
Small	12.82	30.44	115	0.11
Medium	13.76	32.67	47	0.29
Large	15.54	36.89	18	0.86
All size	42.12	100.00	180	0.23

The selected holdings had a total operational area of 42.12 hectares. The average size of holdings is 0.23 hectare.

A. Cost of cultivation of Tapioca

The cost of cultivation per hectare of tapioca under different cost concepts and their percentage distribution to the total cost 'A' is given in the following table

Table 38 - Cost of cultivation per hectare of Tapioca during the year 1999-2000

Sl No	Component of different cost concept	Cost per hectare (in Rs)	% Distribution of cost 'A'
1	Hired human labour	11684	58.40
2	Animal labour	57	0.28
3	Machine labour	542	2.71
4	Seed / seedlings	892	4.46
5	Farmyard manure and chemical fertilizers	4312	21.55
6	Plant protection	27	0.13
7	Land tax and irrigation cess	48	0.25
8	Repair and maintenance charges	117	0.58
9	Other expenses	525	2.62
10	Interest on working capital	1803	9.02
11	Cost 'A'	20007	100.00
12	Interest on fixed capital	1972	
13	Cost 'B1' (11+12)	21979	
14	Interest on land value	121721	
15	Cost 'B' (13+14)	143700	
16	Imputed value of household labour	4274	
17	Cost 'C' (15+16)	147974	

From the above table it is seen that hired human labour cost share of tapioca cultivation accounts to 58 percent The per hectare % share of animal and machine labour accounts to three only during the year 1999-2000. The percentage of hired human labour hours engaged in tapioca cultivation to the total labour hours is given below for males and females separately for each size group of holdings.

Table 39 - Percentage distribution of hired human labour hours

Sex	Holding size class			
	Small	Medium	Large	All size
Male	59.10	49.54	81.21	61.82
Female	11.01	26.98	8.12	17.48
Total	70.11	76.52	89.33	79.30

The above table reveals that the proportion of hired human labour to total human labour input steadily increases with the increase in the size of holdings

The cost towards seedlings / seed accounts to 4% to 26% is spent for farmyard manure and chemical fertilizers. In tapioca cultivation the cost towards plant protection measures and land tax and irrigation cess accounts to below 1% each. The expenditure incurred for repair and maintenance charges comes to 1% of the total cost 'A'. The interest on working capital is estimated at Rs.1803 per hectare. The miscellaneous expenses come to Rs.525 per hectare.

Cost 'B1' and Cost 'B'

Cost 'B1' is estimated by adding the interest on fixed capital to cost 'A'. It works out to Rs.21979 during 1999-2000.

Interest on land value is estimated as Rs.121721 for tapioca cultivation and accordingly cost 'B' is worked out to Rs.143700/-.

Cost 'C'

Cost 'C' is estimated by adding the imputed value of household labour to cost 'B'. It is estimated as Rs.147974 during 1999-2000.

B. Value of out put

The value of output of tapioca during 1999-2000 is found to be Rs.33725

2.4 Banana

During 1999-2000 the total area under cultivation of banana was 39046 hectors. Details of area and yield of banana cultivation in the State for the year 1999-2000 are given in the following table.

Table 40 - Area and Average Yield of Banana during 1999-2000

Total cropped area (hectare)	Area under Banana (hectare)	Average Yield per Per Hectare (kg)	%of area under banana to cropped area.
30001704	39046	14105	0.13

About one percent of the cropped area was under banana cultivation during 1999-2000. The yield per hectare of banana was 14105 kg.

Selected holdings

During 1999-2000 for the estimation of cost of cultivation of banana 180 holdings were selected. The details of there holdings in each size class is given in the following table.

Table 41 - Area and number of holdings selected

Size class	Area under the crop in the sample (hector)	No of selected holdings	Percentage of selected holdings	Area per holdings
Small	11.74	135	35.92	0.09
Medium	12.40	38	37.94	0.33
Large	8.54	7	26.14	1.22
All size	32.68	180	100.00	0.18

The selected holdings had a total operational area of 32.68 hectare. The average size of holding is 0.18 hectare.

Cost of cultivation of Banana

The cost per hectare of banana cultivation under different items and their percentage distribution to the total cost 'A' is given in the following table.

Table 42 - Cost of cultivation per hectare of banana during 1999-2000

Sl No.	Components of different cost concept	Cost per hectare	%distribution of cost 'A'	
1	Hired human labour	26644		28.79
2.	Animal labour	104	0.11	0.12
3.	Machine labour	195	0.21	0.22
4	Seed/seedlings	6720	7.09	7.26
5.	Farm guard manure & chemical fertilizers	38332	23.57	41.42
6.	Plant protection	843	0.89	0.91
7.	Land tax and irrigation cess	702	0.74	0.76
8.	Repaired and maintenance charges	511	0.54	0.55
9.	Interest on working capital	8302		8.97
10.	Other expenses	10187		11.00
11.	Cost 'A'	92540		100.00
12.	Interest on fixed capital	1719		
13.	Cost 'B1' (11+12)	94259		
14.	Interest on land value	58422		
15.	Cost 'B' (13+14)	152681		
16.	Imputed value of household /labour	8237		
17.	Cost 'C' (15+16)	160918		

From the above table it is seen that labour cost accounts to 29%. The percentage of hired human labour hours engaged in Banana cultivation to the total labour hours is given below.

Table 43 - Percentage distribution of hired human labour hours to total human labour hours.

Size	Holding Size Class			
	Small	Medium	Large	All size
male	52.73	59.75	62.84	59.12
Female	8.64	8.21	23.91	11.01
Total	61.37	67.96	86.75	70.13

The percentage share of hired human labour hours to total human labour hours increased as size class increased. About 70% of the total human labour hours constituted for hired human labour and the remaining towards household labour hours. Female hired human labour is low in the case of Banana cultivation.

For planting new plants Rs.6720 is spent. About 42 % of total cost 'A' accounted for farmyard manure and Chemical Fertilizers. Plant protection is yet another component of cost share and comes to 1% Land tax and irrigation cess repair and maintenance charges etc. constitute to 0.76 and 0.55% respectively. The per hectare cost towards interest on working capital is Rs. 8302 and other expenses is Rs.10187/-.

Cost 'B1'

Cost 'B1' is estimated by adding the interest on fixed capital (including land) to cast 'A'. It is Rs.94259 during the year 1999-2000. Per hectare interest on land value is showed in increasing trend, which is worked out to Rs. 58422/-

Cost 'B' and cost 'C'

Cost 'B' is estimated by adding the interest on land value to cost 'B1' and cost 'C' is estimated by adding imputed value of household labour to cost 'B'. During this round cost 'B' is estimated as Rs.152681/- and cost 'C' is Rs. 160918/-. The imputed value of household labour is Rs. 8237/- per hectare.

B. Value of output

The value of output of Banana is found to be Rs.132926 per hectare during the year 1999-2000.

2.5 Pepper

The number of holdings selected for the study on cost of cultivation of pepper was 190 during 1999-2000. The details of these holdings are given below.

Table 44 - Area under pepper during 1999-2000

Holding size class	No. of selected holdings	Area under the crop in the sample (hectare)	Percentage	Area per holding (hectare)
Small	147	9.94	31.78	0.07
Medium	37	13.02	41.62	0.35
Large	6	8.32	26.60	1.39
Total	190	31.28	100.00	0.16

The holdings selected during the period under report have a total operational area of 31.28 hectares. The average size of holding was 0.16 hectare.

A. Cost of cultivation

The cost of cultivation per hectare of pepper is given in the following table.

Table 45 - Cost of Cultivation per hectare of Pepper for the year 1999-2000.

Sl. No.	Components of different cost concept	Cost per hectare (Rs)	%distribution of cost 'A'
1.	Hired human labour	8362	54.96
2.	Animal labour	00	
3.	Machine labour	44	0.29
4.	Seed/seedlings	748	4.92
5	Farmyard manure and Chemical fertilizers	3812	25.05
6	Plant protection	262	1.72
7.	Land tax and irrigation cess	121	0.80
8	Repair and maintenance charges	164	1.07
9	Other expenses	345	2.27
10	Interest on working capital	1357	8.92
11	Total cost 'A'(1-10)	15215	100.00
12	Interest on fixed capital	1933	
13	Cost 'B1' (11+12)	17148	
14	Interest on land value	175601	
15	Cost 'B' (13+14)	192749	
16	Imputed value of household labour	1662	
17	Cost 'C' (15+16)	194411	

From the above table it is seen that about 55% of the total cost 'A' constitutes to labour cost. When compared to the previous year hired human labour cost in large size class showed an increasing trend. The percentage of hired human labour hours engaged in the cultivation of pepper during 1999-2000 is given below.

Table 46 - Percentage of hired human labour hours engaged in pepper cultivation

Holding size class	Male	Female	Total
Small	60.13	7.60	67.73
Medium	66.82	10.84	77.66
Large	75.00	25.00	100.00
All size	66.54	13.63	80.17

During this round 80% of the total human labour hours is hired human labour. The cost of seed/seedlings per hectare is found to be Rs. 748 during this year. It is seen that 25% of the total cost 'A' accounts to farm yard manure and chemical fertilizers. The expenditure to wards plant protection measures is estimated to 1.72% of the total cost 'A' . only a small percentage is expended for land tax and irrigation cess. The estimated expenditures per hectare on repair and maintenance charge of implements and machinery is found to be Rs. 164/- during the period under report. About 9% of the cost 'A' accounts for interest on working capital.

Cost 'B!' and cost 'B'

Cost 'B1' is obtained by adding the interest on fixed capital (including land) to cost 'A' . The interest on fixed capital is estimated to Rs. 1933 and cost 'B1' is formed to be Rs. 17148/- for pepper cultivation.

During this round the imputed value of household labour is not seen in large size class. The interest on land value is found to be RS. 175601/- during this period and cost 'B' is estimated to be Rs.192749. Cost 'C' showed on decreasing trend from Rs.243788/- to Rs.194411 during this year . This is due to the decrease in land value.

The Comparison of the various concept of cost with previous year is given in the following table

Table 47 - Cost of cultivation of pepper Rs/hectare for 1998-1999 and 1999-2000

Concept of cost	year	Holding size class			
		Small	Medium	Large	All size
Cost 'A'	1998-1999	15186	17418	12922	15478
	1999-2000	15669	12047	22113	15215
Cost 'B'	1998-1999	266279	185026	314359	241050
	1999-2000	208255	160152	228068	192749
Cost 'C'	1998-1999	270867	186822	315451	243788
	1999-2000	212475	161843	228068	194411

When compared to the previous year the cost 'A' has decreased to 1.69% cost 'B' by 20% and cost 'C' by 20.25%.

B. Output

The estimated value of output obtained from pepper cultivation is found to be Rs. 57136 per hectare during 1999-2000.

Chapter-3

Summary of findings

The data furnished in this report are collected through the cost of cultivation survey 1999-2000. The crop 5covered in this report are Paddy (3 Seasons), Coconut, Tapioca, Banana and Pepper.

1. **Autumn Paddy**

   The per hectare cost of cultivation when considered to cost 'A' during the year 1999-2000 is Rs.16218/-. When compared to previous year it showed a decrease of 6%. This is due to the low quantum of work done in input such as hired labour, machine labour, farmyard manure and chemical fertilizers

2. **Winter Paddy**

   During 1999-2000 the per hectare cost of cultivation of winter paddy is Rs.17916 when cost 'A' is considered. It showed an increase of 8% when compared to the previous year

3. **Summer Paddy**

   It is seen that the per hectare cost of cultivation of summer paddy is Rs.19354/- which showed a decrease of 6% when compared to the previous year.

4. **Coconut**

   The per hectare cost of cultivation of coconut is Rs.17125 when cost 'A' is considered. When compared to the previous year it showed an increase of 10%

5. **Banana**

   The per hectare cost incurred for Banana cultivation is Rs.92540 during this year when considered to cost 'A' . The per hectare value of output of Banana is Rs.132926.

6. **Tapioca**

   While considering the cost component 'A', of the per hectare cost of cultivation of tapioca is Rs.20007. The per hectare value of output is Rs.33725/-

7. **Pepper**

   During 1999-2000 the per hectare cost of cultivation of pepper comes to Rs.15215/- when considered the cost concept 'A'. The estimated value of per hectare output obtained from the pepper cultivation is Rs. 57136/-

APPENDIX – 1

Cost of Cultivation Per hectare of Autumn Paddy during the year 1999-2000

Sl No	Components of different Cost Concept	Holding size class			
		Small	Medium	Large	All size
1	Hired Human labour	11241	9806	9450	9874
2	Animal labour	1057	534	68	502
3	Machine labour	1349	1222	1019	1142
4	Seed/seedlings	1149	933	946	972
5	Farmyard manure and chemical fertilizers	2833	2447	1916	2336
6	Plant protection	215	130	246	183
7	Land tax and Irrigation cess	42	31	24	31
8	Repair & Maintenance charges	132	213	239	185
9	Interest on working capital	900	765	697	761
10	Other Expenses	161	235	293	232
11	Total cost 'A' (1-10)	19079	16316	14898	16218
12	Interest on fixed capital	1266	953	861	1047
13	Cost 'B1' (11+12)	20345	17269	15759	17265
14	Interest on Land value	20696	18547	14542	17847
15	Cost 'B' (13+14)	41041	35816	30301	35112
16	Imputed value of household labour	1942	1000	337	996
17	Cost 'C' (15+16)	42983	36816	30638	36108

APPENDIX – 2

Cost of Cultivation Per hectare of Winter Paddy during the year 1999-2000

Sl No	Components of different Cost Concept	Holding size class			
		Small	Medium	Large	All size
1	Hired Human labour	10595	10288	9314	10018
2	Animal labour	903	536	585	629
3	Machine labour	1407	1528	1837	1610
4	Seed/seedlings	1016	1004	1014	1011
5	Farmyard manure and chemical fertilizers	2958	2400	2231	2457
6	Plant protection	209	184	258	214
7	Land tax and Irrigation cess	47	39	42	42
8	Repair & Maintenance charges	1439	382	120	512
9	Interest on working capital	864	808	829	827
10	Other Expenses	188	218	1339	596
11	Total cost 'A' (1-10)	19626	17387	17569	17916
12	Interest on fixed capital	1032	746	650	814
13	Cost 'B1' (11+12)	20658	18133	18219	18730
14	Interest on Land value	17018	15613	14288	15450
15	Cost 'B' (13+14)	37676	33746	32507	34180
16	Imputed value of household labour	1882	797	524	928
17	Cost 'C' (15+16)	39558	34543	33031	35108

APPENDIX – 3

Cost of Cultivation Per hectare of Summer paddy during the year 1999-2000

Sl No	Components of different Cost Concept	Holding size class			
		Small	Medium	Large	All size
1	Hired Human labour	10419	9977	9770	9994
2	Animal labour	975	421	441	549
3	Machine labour	1447	1759	1937	1760
4	Seed/seedlings	1216	1204	1008	1128
5	Farmyard manure and chemical fertilizers	3182	2737	3055	2874
6	Plant protection	497	574	759	631
7	Land tax and Irrigation cess	106	143	249	178
8	Repair & Maintenance charges	224	312	49	557
9	Interest on working capital	933	861	896	887
10	Other Expenses	928	546	954	796
11	Total cost 'A' (1-10)	19927	18534	19118	19354
12	Interest on fixed capital	904	1094	462	843
13	Cost 'B1' (11+12)	20831	19628	19580	20197
14	Interest on Land value	15974	10871	7588	10706
15	Cost 'B' (13+14)	36805	30499	27168	30903
16	Imputed value of household labour	2678	1296	341	1225
17	Cost 'C' (15+16)	39483	31795	27509	32128

APPENDIX – 4

Cost of Cultivation Per hectare of Coconut during the year 1999-2000

Sl No	Components of different Cost Concept	Holding size class			
		Small	Medium	Large	All size
1	Hired Human labour	8468	7798	7919	7923
2	Animal labour		47	60	50
3	Machine labour	211	188	423	325
4	Seed/seedlings	60	67	63	64
5	Farmyard manure and chemical fertilizers	5476	4794	4925	4927
6	Plant protection	97	114	76	91
7	Land tax and Irrigation cess	47	49	88	71
8	Repair & Maintenance charges	193	583	826	620
9	Interest on working capital	1500	1382	1560	1494
10	Other Expenses	684	812	2131	1560
11	Total cost 'A' (1-10)	16736	15834	18071	17125
12	Interest on fixed capital	2837	1858	1450	1847
13	Cost 'B1' (11+12)	19573	17692	19521	18972
14	Interest on Land value	183789	210008	196523	200071
15	Cost 'B' (13+14)	203362	227700	216044	219043
16	Imputed value of household labour	3035	1187	781	1108
17	Cost 'C' (15+16)	206397	228887	216825	220151

APPENDIX – 5

Cost of Cultivation per hectare of Tapioca during the year 1999-2000 (in Rs.)

Sl. No	Component of different cost concept	Holding size class			
		Small	Medium	Large	All sizes
1	2	3	4	5	6
1	Hired human labour	11723	12872	12978	11684
2	Animal labour	72	65	82	57
3	Machine labour	62	275	465	542
4	Seed /Seedlings	1109	874	927	892
5	Farmyard manure & chemical fertilizers	4512	4443	4372	4312
6	Plant protection	47	21	17	27
7	Land tax and Irrigation cess	54	41	38	48
8	Repair and maintenance charges	122	171	29	117
9	Interest on Working Capital	1774	1890	1945	1803
10	Other expenses	215	352	617	525
11	Total cost 'A' (1-10)	17916	21004	21470	20007
12	Interest on fixed capital	1985	2117	1027	1972
13	Cost 'B1' (11 + 12)	19901	23121	22497	21979
14	Interest on Land value	171219	97819	105972	121721
15	Cost 'B' (13 + 14)	191120	120940	128469	143700
16	Imputed value of household labour	4512	3815	1298	4274
17	Cost 'C' (15 + 16)	195632	124755	129767	147974

APPENDIX – 6

Cost of Cultivation per hectare of Banana during the year 1999-2000 (in Rs.)

Sl. No	Component of different cost concept	Holding size class			
		Small	Medium	Large	All sizes
1	2	3	4	5	6
1	Hired human labour	22732	25517	26101	26644
2	Animal labour	17		375	104
3	Machine labour	191	61	393	195
4	Seed /Seedlings	7428	7091	5214	6720
5	Farmyard manure &chemical fertilizers	22538	19341	20872	38332
6	Plant protection	712	701	1227	843
7	Land tax and Irrigation cess	644	1092	214	702
8	Repair and maintenance charges	812	172	9	511
9	Interest on Working Capital	5948	6186	7181	8302
10	Other expenses	5865	9155	17629	10187
11	Total cost 'A' (1-10)	66887	69316	79215	92540
12	Interest on fixed capital	1874	1765	2117	1719
13	Cost 'B1' (11 + 12)	68761	71081	81332	94259
14	Interest on Land value	61712	62817	59619	58422
15	Cost 'B' (13 + 14)	130473	133898	140951	152681
16	Imputed value of household labour	12817	8619	3815	8237
17	Cost 'C' (15 + 16)	143290	142517	144766	160918

APPENDIX – 7

Cost of Cultivation Per hectare of Pepper during the year 1999-2000

Sl No	Components of different Cost Concept	Holding size class			
		Small	Medium	Large	All size
1	Hired Human labour	9547	6517	12052	8362
2	Animal labour				
3	Machine labour	140			44
4	Seed/Seedlings	169	712	1498	748
5	Farmyard manure and chemical fertilizers	3813	2766	5446	3812
6	Plant protection	101	131	657	262
7	Land tax and Irrigation cess	70	189	76	121
8	Repair & Maintenance charges	165	128	259	164
9	Interest on working capital	1403	1066	1980	1357
10	Other Expenses	261	538	145	345
11	Total cost 'A' (1-10)	15669	12047	22113	15215
12	Interest on fixed capital	1763	2423	1720	1933
13	Cost 'B1' (11+12)	17432	14470	23833	17148
14	Interest on Land value	190823	145682	204235	175601
15	Cost 'B' (13+14)	208255	160152	228068	192749
16	Imputed value of household labour	4220	1691		1662
17	Cost 'C' (15+16)	212475	161843	228068	194411

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